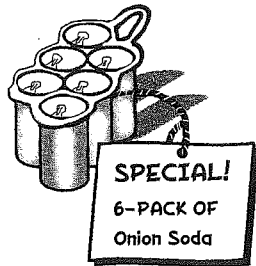


Name _____

1. The United States has the world's highest consumption of soda pop. The average person drinks 87.2 gallons of soda a year. About how many 12-ounce cans of soda is this?



2. Evaluate: $-4(-2)^2$

3. Circle examples that are not equations.

- a) $2 + 10 + 4 = 16$ d) $0 = 29 \cdot 0$
 b) $8n = -4$ e) $x + y < 40$
 c) $16y > 5x$ f) $8n - 4$

4. Solve: $-\frac{1}{3}x + 22 = 2x - 3$

5. Brian Duffield holds the record for being the world's fastest raw onion eater. He ate a 7.47-ounce onion in 1 minute, 32 seconds.
- What is the rate at which he ate this onion (in ounces per second)? Round to the nearest hundredth.
 - If he could continue at this rate, how long would it take him to eat a 10-oz onion?
 - If he could continue at this rate, how many 6-ounce onions could he eat in $7\frac{1}{2}$ minutes?

Name _____

1. It took Mat Hand three minutes to eat 133 grapes. This set a world record for fast grape-eating. At that rate, could he eat 1,000 grapes in 20 minutes?

2. Which expression has greater value?

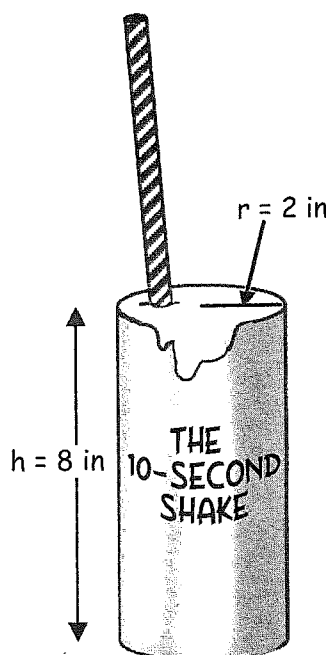
$\sqrt[3]{17,576}$ $\sqrt[5]{59,049}$

3. Write this in numbers and symbols:

The cube root of two hundred sixteen is greater than or equal to the sum of a number (x) and the square root of nine.

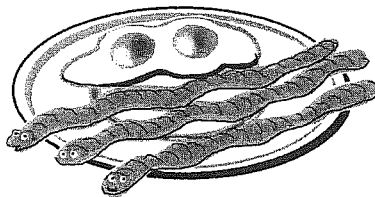
4. Give two possible values for x in the equation below.

$$x^2 + 2x = 24$$



5. The world's fastest milkshake drinker consumed a 500-ml shake in ten seconds. Did he drink more or less than the amount that could fit in this glass? (Assume the glass holds 34 ml per 10 cubic inches of space.)

1. Residents in the United Kingdom are the top eaters of breakfast! The average person eats 171 lb, 10 oz of breakfast each year. Convert this measurement to grams.



World Record Fastest Worm Eating

200 Worms in
30 Seconds

C. Manoharan Manu,
India

2. Simplify: $-4x(2x^3)$

3. In which equation is x not equal to 10?

a) $\frac{9x^2}{10} - 5 = 7x + 15$

b) $3(x + 7) - 12 = 5x - 11$

c) $x^2 - 8x + 3x - 24 = 126$

4. Simplify both sides of the equation.

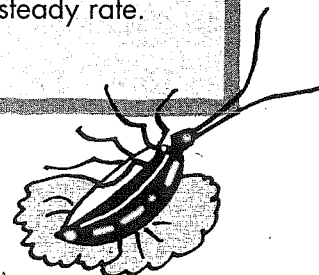
$5(2n - 2) = 3(n - 1) + 7$

5. Write a ratio to show the number of worms eaten in 15 seconds compared to the number of cockroaches eaten in 15 seconds. Assume that both eaters consumed their creatures at a steady rate.

World Record Fastest Cockroach Eating

36 Cockroaches
in One Minute

Ken Edwards, UK



1. In 2003, residents of Finland each drank on the average of 1,682 cups of coffee in the year. People in Ireland drank the most tea: 1,302 cups each, on average.

Assume that each cup held **8 ounces**. Find the difference (per person, in ounces) between the amounts consumed.

2. Simplify: $\sqrt{25x^2} + \sqrt[4]{16x^4}$

3. Evaluate each expression for $y = -6$.

a) $7y$

b) $\frac{y}{72}$

c) $y^2 - 10y$

4.

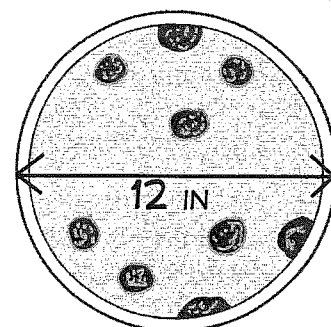
Explain how you determine the slope of a line from looking at its graph.

5. It took Zaphod Xerxes only 4 min, 56 sec to eat a 12-inch pizza. This set a record for the fastest time to eat this size pizza.

Assuming he ate at a steady rate, how long would it take him to eat a slice of this pizza that had an outside edge with a measurement of 6.28 inches?



YUM!



Name _____

1. Fill in the missing numbers on the table.

FRACTION	DECIMAL	PERCENT
$\frac{7}{8}$		
		36%
	0.2	
		12%
	0.8	
$1\frac{3}{10}$	1.3	130%

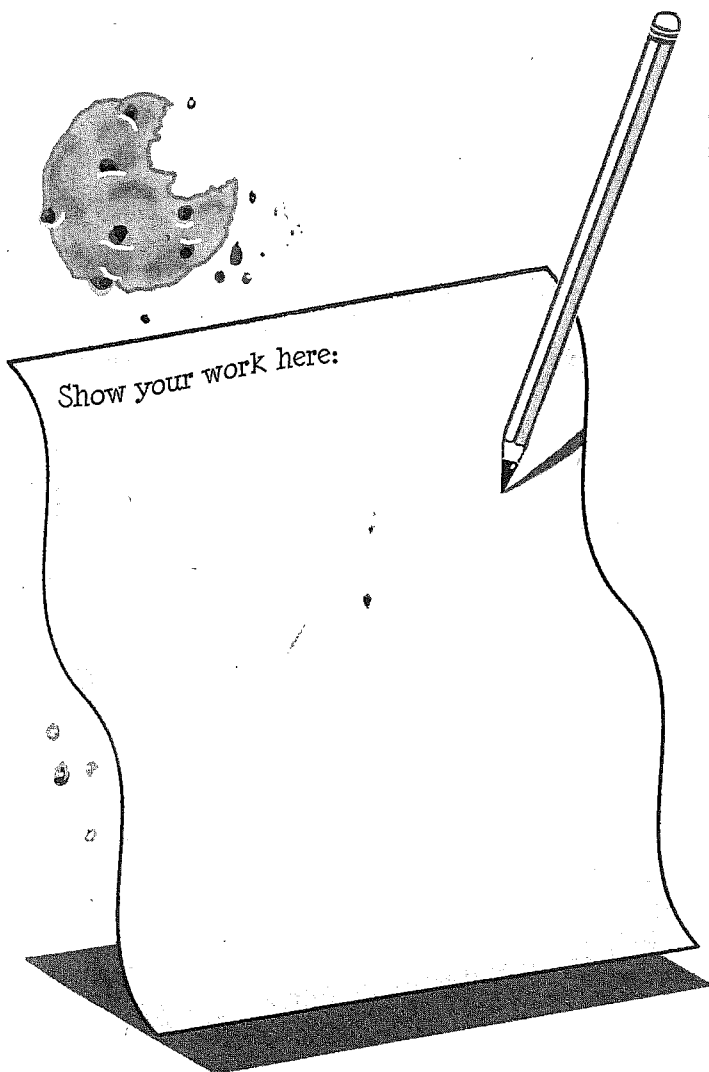
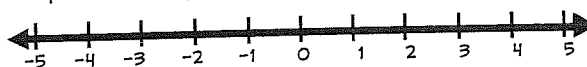
2. Explain how you can tell if this is a linear equation.

$$12x(5 + 2x) - 6x^2 = 50x^2 - 8$$

3. Solve: (Remember that there are two cases for absolute value.)

$$|3x - 2| = 10$$

4. Graph the inequality: $2x \leq -1$



5. Challenge Problem

At an eating competition, two competitors (John "Hog" Hanner and Benjamin Belch) vied for the championship cookie-eating trophy. John ate twenty cookies an hour more than Ben. In the time it took for all the cookies in the monstrous cookie jar to be eaten, John ate 210 cookies, while Ben ate 90.

- How many cookies did each competitor eat per hour?
- What was the total time to eat all the cookies?

